EASTERN CONNECTICUT RICH IN NATURAL RESOURCES

Unappropriated Opportunities Invite New London and Windham Counties to the Threshold of Future Growth and Enlargement--Waterpower Sites---Harbors and Navigable Waterways---Fertile Fields for Agriculturalists.

From its coast line on the south, deeply indented to form some of the best harbors on the Connecticut seaboard, to the smiling hills, meadows, and valleys of the inland agricultural regions, Eastern Connecticut, which comprises the two counties of New London and Windham, beckons in countless ways with the finger of opportunity to those who will but enter and possess the land. Fair it looked to our ancestors of the long ago; fair and productive it has proven to thousands who have won fortunes here in agricultural, mercantile and manufacturing fields; still more fair and inviting and productive can it be to the man or woman who enters here and exercises that proper energy and brain power without which there is no highway to prosperity.

Whether one wishes to find a good farm, establish a manufacturing plant, locate a business or make it his home, this section of Connecticut offers opportunities which might well be coveted by many less favored regions, either in our own New England or over the broad United States. Eastern Connecticut has water power, timberlands, fertile farm land, beautiful scenery, fine educational institutions, progressive residents and great natural resources. Its development has by no means reached its height, and the signs are not wanting that there is to be expected an extensive growth and enlargement that will make notable the coming decade of our history.

NEW ENGLAND OUTSTRIPPING THE MIDDLE WEST.

For years we have been accustomed to think that the west—the great middle west—was outstripping New England by leaps and bounds. It must be gratifying as well as much of a surprise to learn that such a belief is not borne out by the figures.

It is New England that is forging ahead, while the middle west is pausing in its development. Massachusetts, Rhode Island and Connecticut, according to the latest statistics, have a larger gain in population than Michigan, Missouri, Indiana, Iowa, Kansas or Ohio. Between 1900 and 1910, Massachusetts' gain was 20 per cent., Rhode Island's 26 and Connecticut's 22, whereas the increased percentage in Michigan was 18, Missouri 6, Indiana 7.8, Kansas 13, Ohio 14.7, while Iowa instead of a gain showed a slight decrease.

The indications are all for a larger New England. A larger New England means more homes, more business prosperity. To be a sharer in this promised era of still further growth and development Eastern Connecticut stands ready with natural resources and advantages that invite greater enlargement and extension.

RESOURCES READY AT OUR HAND.

Consider for a moment what the resources are that nature has placed here ready for the hand and brain of man to appropriate and fashion to his own uses. The two counties of Eastern Connecticut—New London and Windham—comprise 1,196 square miles, practically one-fourth of the state's total area of 4,845 square miles. Threading through the 681 square miles which make up the area of New London county and no less extending through the 515 square miles comprised in Windham county is an extensive system of rivers and their tributaries whose water-power turns millions of dollars into the lap of industry. Here is a nature-given asset ready at our hands which less favored communities would spend millions to acquire. In New London county the Thames, Shetucket, Yantic, Quinebaug, Pawcatuck, Mystic, Poquonock and Niantic rivers with their tributary streams furnish power for mills and manufacturing plants whose product totals annually into many millions of dollars, while in Windham county the same gold-bearing streams are furnished by the waters of the Quinebaug, Shetucket, Hop, Moosup, Willimantic and Natchaug rivers and their feeders. The rugged and broken character of the country contributes to the value of these water powers, offering opportunities for profitable development at minimum expense.

FIELD FOR THE HYDRAULIC ENGINEER.

To the utilization of these water-powers, whose possibilities caught the eye of the pioneers of our manufacturing industries, can be attributed much of the importance of this section and also of other parts of New England. But are the opportunities in this field all exhausted? Great as has been the development of our water-power, there is no reason to conclude that there are no chances yet open for the incoming manufacturer who would locate here; but rather to the contrary. The mechanical engineer of today finds power possibilities unrevealed to the engineer of a decade ago, and through the progress of hydraulic engineering places hitherto unthought of come into possibilities for water-power sites.

New capital interested and new sites developed mean greater prosperity for Eastern Connecticut, more wealth for her capitalists, more work and better wages for her mechanics and operatives. Mechanical ability seems an inborn gift in the people of this section and in no portion of the world can the manufacturer find employes more skilled and capable. To the other inducements for locating new industries here is added this most important one of the availability of a large number of intelligent operatives for any class of manufacturing, assuring the owners that they have nothing to fear from the handicap of scarcity of help, satisfied to live in a locality so richly endowed with all the advantages and comforts that go to make life worth living.

HARBORS AND NAVIGABLE WATERWAYS.

Rarely favored too is this region in its seaboard privileges. Bordering on Long Island Sound for about 30 miles, the southern part of New London county offers some of the best harbors which the state affords, and the navigable waters of the county are extensive and unsurpassed by those of any portion of the country of equal extent upon the coast. The harbors of New London, Mystic, Stonington and Niantic open into the magnificent reaches of Long Island Sound, and the inland harbor at Norwich at the head of the Thames river puts that city into tide-water communication for both freight and passenger transportation. From New London to Allyn's Point is a ten-mile channel 200 feet wide and 20 feet deep, while for the remaining five miles from Allyn's Point to Norwich the channel depth is 14 feet. The last reported tonnage for Allyn's Point, Norwich and intermediate points, covering the year 1909, was 497,725 short tons, valued at $7,513,527. River commerce to these points consists principally of coal, lumber and steamboat freight. Dredging and other improvements in the river carried on by the government since 1902 has reduced the cost of transportation by enabling freight to be brought in vessels of 16 and 18-foot draught instead of 8-foot draught.

NEW LONDON'S MAGNIFICENT HARBOR.

In the water system of Eastern Connecticut the gem of all is New London harbor, a safe and sheltered haven that is one of the finest on the Atlantic seacoast. Nearly equidistant between New York and Boston here is found a sheltered refuge for vessels of any size, never freezing and commodious enough to float a fleet of many sail and heavy tonnage. Three miles in length New London harbor has a navigable width of from one-quarter mile to a mile and a quarter and a depth of 26 feet or more in the main channel from Long Island Sound to the railroad drawbridge which crosses the river above the New London dock front. Through government appropriations within a few years a ship channel over 400 feet wide has been dredged and maintained so that a draft of 23 feet can be carried to opposite all the principal docks. The effect of this improvement has been to materially reduce freight rates. For the year 1909 the reported commerce of New London, principally steamboat freight, coal, cotton, oil and building material was 707,768 short tons, valued at $80,247,609. To this is to be added the commerce of Shaw's cove, a branch of the harbor which handled 25,104 short tons, valued at $105,488.

At the upper end of this fine waterway is the United States navy yard, so advantageously located as to call forth from experts in the service the oft-repeated prophecy that it could not fail to be a place of great future importance.

For shipbuilding and other maritime industries New London harbor is admirably adapted and it is not without the bounds of possibility that the development of the coming years may be along these lines, reviving again the importance once enjoyed by the city's shipping in the old whaling days, and contributing a new and large factor to the general total of the county's prosperity.

FOR THE AGRICULTURALIST.

In the two counties of Eastern Connecticut are likewise opportunities for the agriculturalist, who can find here many rich and fertile farmlands, with soil adapted to fruit culture, the raising of grain, grazing, and the output of dairy products. Well watered and productive farmlands invite the modern farmer to a harvest that will well repay for the labor of the year. Disastrous climatic changes rarely work havoc with the fruits of the farmers' labor, but an equable and dependable degree of summer heat and winter cold insure a good crop return to the tillers of the soil. Especially in the northern part of Windham county, in the towns of Pomfret, Putnam, Woodstock, Thompson and adjoining towns, are dairying and fruit raising extensively followed and rewarded with the success that is shown in sleek herds of pedigreed cattle, smiling orchards of high quality peaches, apples and pears and heavily laden patches of the small fruits.

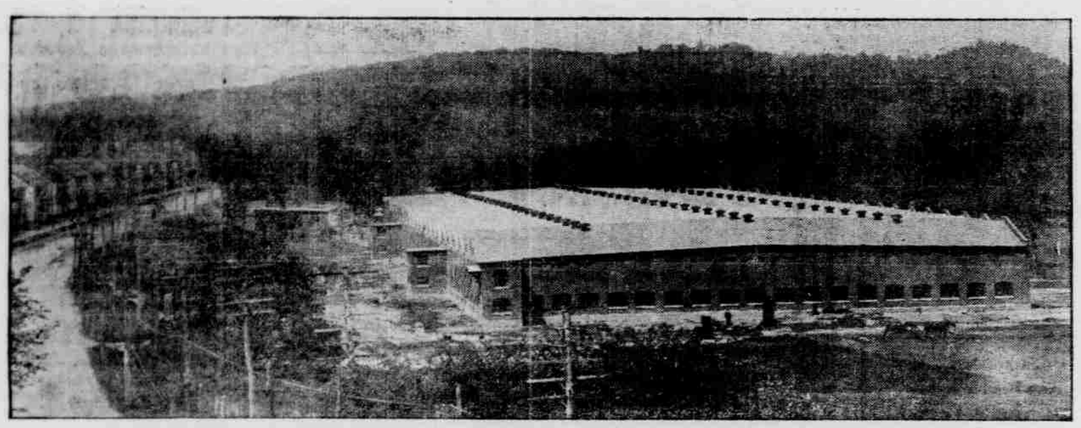
Markets are accessible and close at hand with a population verging on 150,000 to be supplied, while it is no great distance to ship to the big centers of population in New England and New York. Quality counts in any market and with a proper study of demand and supply and the crop possibilities of his fields, adapting one to the other, the Eastern Connecticut farmer may hitch his wagon to the star of prosperity.

SCIENCE TO THE FARMERS' AID.

To counteract the drift that carries the young people away from the farm to the city there is coming a better knowledge of farming methods, a better directed application of farm labor to secure specific results. Government soil survey is giving the agriculturalist a chance to really know his land so that he can put in his crops to the best advantage. The state agricultural college at Storrs in our neighboring county of Tolland dispenses knowledge of scientific farming that equips the rising generation for an intelligent effort to get paying results, and farming "with brains" will be the order of the day hereafter. Under these conditions what are not the possibilities of the farmlands of Eastern Connecticut?

PONEMAH COMPANY ERECTS MONSTER NEW WEAVE SHED

One of the Largest in the World—Third to be Built in This Country with Reinforced Concrete Roof—Over Three Acres Floor Space—About 3400 Looms.



PONEMAH COMPANY'S NEW WEAVE SHED AT TAFTVILLE

By the erection of their gigantic new weave shed, 700 feet long and 200 feet wide, than which there are few larger in the world, the Ponemah company of Taftville made the most notable addition to the manufacturing plants of the town of Norwich in the past year. Ground was first broken July 24, 1909, and the Providence construction company which did the work had completed the contract by the early part of June, 1910. When in operation the new weave shed will add about 3,400 looms to the capacity of this mammoth cotton mill, that leads any other single manufacturing plant in the town in the amount of wages which it annually disburses. The new weave shed will cost something over $250,000, it is stated.

SUPPORTED BY 990 CONCRETE PIERS.

From foundation to cap stone each detail of the new mill is of impressive bigness. Supporting the whole structure are 990 concrete piers, 24 inches square at the top, driven down from three to five feet to hard bottom, and forming the bases for an equal number of columns which carry the roof and the floor. Of the 990 columns 154 are of six-inch cast-iron and support the roof. The main floor is carried on 836 intermediate columns, 308 of cast-iron and 528 of hard pine. In the basement also are located four concrete piers to carry the four motors that will furnish power to the looms. The electric current comes by a pole line from the old mill where a new Allis-Chalmers high-speed steam turbine has been installed to generate the power. All the main shafting is to be located in the basement, a new point which is followed in modern mill construction.

The big weave shed floor, with an area of 140,000 square feet, or not quite 3 1-3 acres, is of three thicknesses of planking, laid diagonally to withstand vibration. The first course is 5-inch Florida yellow pine, above this seven-eighths inch North Carolina pine, and the top course seven-eighths inch hard maple.

TWENTY-TWO SAWTOOTH SECTIONS IN ROOF.

The roof is of the sawtooth design generally followed in weave sheds to allow only the light from the north to enter. There are 22 sections, or teeth, in the roof with a total length of 673 feet.

LARGEST WEAVE SHED WITH CONCRETE ROOF.

In one point in the construction of its roof the new weave shed achieves distinction, since it is made of concrete, reinforced with expanded metal, and is the third and largest weave shed to be built with a concrete roof in this country. The other two are in New Bedford. Roofs of concrete have presented problems in condensation in the past due to uneven expansion in winter when a high temperature was maintained inside the weave shed, but the two mills in New Bedford are standing the test successfully.

Besides the expanded metal and other material, 3,000 tons of concrete were poured into the roof, this immense weight being supported by 26-inch and 16-inch steel beams and rafters held on 154 six-inch cast-iron columns. The concrete is four inches thick and is covered with an eight-ply tar and gravel roof, finished with slag.

EXTENSIVE VENTILATION SYSTEM.

The ventilation system is extensive and complete, there being 66 ventilators, three for each sawtooth, each 30 inches in diameter. They are opened and closed by cords from the floor of the weave shed and further ventilation is provided by sashes in the middle of each sawtooth, controlled by an opening device from the floor. Transom windows at the end of each tooth add still further to the ventilating facilities. The windows of the roof extend the length of each section, the glass being 17 by 80, double glazed, with a heavy ribbed pane on the outside and a plain pane on the inside. There is also an air-moistening system comprising 150 sectional humidifiers with two Knowles triplex pumps with a total capacity of 2,000 gallons.

HEATED BY HOT WATER.

The whole mill is heated by hot water, forced by a gasoline engine through a seven-inch pipe into heating coils that run around the walls and ceiling. There is a complete sprinkler system with 2,728 heads, and the total length of all the pipes in the weave shed is estimated at 9 miles. There are eight outside hydrants connected with fire pumps. The boiler house, 63x43x20 feet high, with two Dillon boilers installed and room for two more is located at the northwest corner of the building. It has a 100 foot chimney and a coal pocket 70 feet long, over which the Ponemah company's side runs a hard pine trestle next to the street.

The commodious shipping room at the north end of the mill is reached by a spur track from the company's siding, over which it operates an electric locomotive for freight transfer.

TOWERS AND BRIDGES.

In the two towers, 15x30, which are located on each side of the mill, are the eight toilet rooms, the brick work finished in white enamel, with concrete floors.

Set back over 100 feet from the street, the mill is reached by two bridges with a slight down pitch to the entrances. The south bridge is 134 feet long, the north one 100 feet. The bridges have a width of 10 feet, iron entrance gates, iron railings, and electric lighting from archways over the center of the walk.

In connection with the building of the new weave shed, the Ponemah company is erecting a new stone wall along the entire front of the property, involving some highway changes and improvements for which permission was secured from the town, the company with its usual enterprising spirit assuming the entire expense.

16,876,416 Trolley Passengers in 1910

Great Volume of Business in New London and Windham Counties — Population Centers and Surburban Districts Reached by 156 Miles of Track — Inter-state and Intercounty System Centers at Norwich — New Road Under Construction Towards Norwich.

That modern worker of transformations in city and suburban conditions, the trolley, has stretched its revivifying fingers of wire and rail between the principal points of population in New London and Windham counties through lines that operate 156 miles of track within their borders. Besides affording this popular mode of travel between the population centers, big stretches of suburban and farming land are given the benefit of ready access to the business communities, from which it can be shown that the retail merchant of the cities is an incalculable gainer.

Figures furnished from the four trolley lines operating in the two counties show that approximately 16,876,416 passengers were carried on the trolley lines during the past year, enough to allow 120 rides per year to every man, woman and child of the population of 139,164 in the two counties. For the transportation of this 16 million of passengers the trolley companies ran their cars a total of 3,058,513 miles.

LINES IN THIS TERRITORY.

From New London as the southern limit to West Thompson on the northern border of Windham county extends the main arterial line of trolley traffic, the New London division, so-called, of the Connecticut company. Diverging lines of the system reach Willimantic and South Coventry to the west of the main line from Norwich and Moosup to the east from Central Village.

To the north from Putnam the trolley traveller may continue his journey by connecting lines to Worcester and to the east from Danielson one may reach Providence by trolley.

From Groton eastward another stretch of territory along the coast line of Long Island Sound is reached by the Groton and Stonington Street railway, and from New London westward the New London and East Lyme Railway company makes accessible another section of shore and suburban territory. A connecting link from East Lyme to Saybrook is considered among the possibilities of the future, joining the eastern shore line of the state to the western by trolley.

NORWICH THE BIG TROLLEY CENTER.

As the trolley center of the entire region, Norwich stands out pre-eminently, making Franklin square the local and transfer point for many millions of people in a year. Here meet both the inter-county and the interstate systems by which trolley communication is established with all of New England. Here with the city lines of the Connecticut company converge the line from New London and Montville, the line from Willimantic, and the line from Putnam, Central Village and Jewett City. Coming to the same point for its terminal is the Norwich and Westerly railway a trolley line of 22 miles which reaches a farming region not otherwise provided with public transportation facilities.

Aside from their utilitarian aspect, the trolleys of Eastern Connecticut offer rides through regions of charming scenic variety and attractiveness and in the summer time offer an easy and delightful way by which the dwellers in the inland districts reach the cooling breezes and waters of the coast.

TROLLEY TRAFFIC IN 1910.

What the trolley business of the four county lines was for the last year is shown in the following table:

CONNECTICUT COMPANY, NEW LONDON LINES.

Mileage operated	102
Passengers carried	12,433,781
Car miles run	2,136,124

GROTON AND STONINGTON.

Mileage operated	20
Passengers carried	2,169,217
Car miles run	422,153

NORWICH AND WESTERLY.

Mileage operated	22
Passengers carried	1,382,105
Car miles run	318,593

NEW LONDON AND EAST LYME.

Mileage operated	12
Passengers carried	891,313
Car miles run	181,643

BUILDING A NEW LINE.

What holds special interest for the future and is confidently expected to result in important developments in a territory hitherto untouched by this modern messenger of progress is the building of the new line of the Norwich, Colchester and Hartford Traction company, 40 miles long between the terminal points indicated. It extends through parts of the towns of Norwich, Bozrah, Lebanon, Colchester, Marlboro, Glastonbury, East Hartford and Hartford. The first work was begun on September 8, 1910 on a ten-mile stretch from Hillstown to Hartford, which it is planned will be put into operation as soon as completed. The carbarn and powerhouse are to be at Colchester.

What is of particular interest to Norwich in connection with this road is the recently announced change of plan for entering the city, for which permission will be asked of the legislature. Originally it was intended to come down from Yantic along a private right of way on the west bank of the Yantic river to reach the tracks of the Connecticut company at Thames square, but the plan now announced is to enter the city on Sherman street at the Falls, from which Franklin square will be reached by a line through Oneco street, Lincoln avenue, Washington street, Church street and Bath street, most of these being residence streets upon which there are now no street railway tracks. The new plan also provides for tracks across Washington square through portions of Water, Market, Commerce and Shetucket streets and West Breed lane, all points which are not now directly reached by trolley.

With the completion of this road to Norwich will be added a new contributor to the importance of this city as a trolley center, making it accessible as a shopping and business field for visitors from a new contributing territory. The road has announced its intention of pushing the construction as fast as possible, opening sections of ten miles for operation as fast as they are completed.

Over $300,000 In Construction of Gravel and Macadam Roads

New London and Windham Counties Bettering Their Highways — Much Done and More Work Planned for 1911.

In step with the demands of modern times for ever improving roads and highways, much new road buildings has been done in recent years in New London and Windham counties, connecting the rural districts by many miles of improved and well constructed modern roads for wagon and automobile travel.

In New London county during the past year through state aid, probably something over $200,000 was expended in road work, putting in extensive stretches of gravel or macadam road in various parts of the county. The use of thousands of gallons of oil contributed to the general satisfaction given by this road building which was done in all sections of the county.

Among the principal pieces of new road work were the new macadam for the Norwich to New London turnpike, a stretch of road from Salem to Colchester, quite a section of road in East Lyme, a small piece of road in Ledyard, and a section of the Norwich to Jewett City road. A contract just awarded has been for 2,250 feet of new state road on the Scotland road, which is to be built by the town of Norwich.

WINDHAM COUNTY ROADS LAST WELL.

Windham county boasts macadam roads built 14 years ago that are yet as smooth as a floor, and as a rule the county roads have been compared to their great credit with roads built in Rhode Island and Massachusetts the same length of time. Eleven of the Windham county towns applied for state aid this year, contracts for and work aggregating $102,540 were let. Without any outlay by the towns and with results that satisfied everyone 86,000 gallons of oil were applied to the Windham county roads during the year.

At the present time there are two road contracts underway in Killingly and two more surveys are being made, one on the Danielson-Killingly road, the other through Elmville and Elliottville to the Rhode Island state line. There are from three to four miles under construction in Plainfield towards Jewett City.

Plans are being prepared for eleven short sections in Ashford to improve various bad sections of road, and there are plans for about four miles of new road work from Brooklyn to Canterbury town line and Canterbury center. By plans that are being made Chaplin and Hampton are to have 14,345 feet of new road, 9,700 feet in Chaplin and 3,645 feet in Hampton. There is also a survey for 15,220 feet from Sterling station through Oneco to Rhode Island state line.